



# International Living With a Star (ILWS)

A New Collaborative Space Program In Solar, Heliospheric and Solar Terrestrial Physics

Hermann Opgenoorth (ESA, Chair) • David Sibeck (NASA, Executive Secretary) • Madhulika Guhathakurta (NASA) • William Liu (CSA) • Takeo Kosugi (ISAS) • Lev Zelenyi (RAS)

## CHARTER

**OBJECTIVES:** To Stimulate and Facilitate:

- Study of the Sun-Earth connected system and the effects which influence life and society.
- Collaboration among potential partners in solar-terrestrial space missions.
- Synergistic coordination of international research in solar terrestrial studies, including all relevant data sources as well as theory and modeling.
- Effective and user driven access to all data, results, and value-added products.

**MEMBERSHIP:** Space organizations committed to contribute to ILWS over the next decade. Contributions to include any of the following:

- Space Flight Missions
- Mission payloads or subsystems
- Mission launch or tracking services
- Additional data sources supporting flight missions (sounding rockets, balloon, or ground-based)
- Data dissemination, storage, distribution, and value-added systems
- Supporting theory and modeling

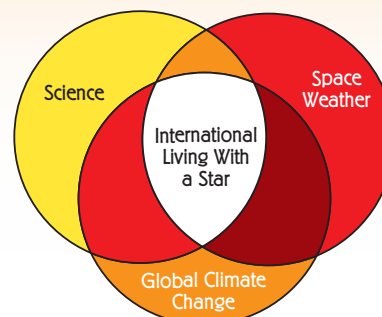
## STEERING COMMITTEE AND WORKING GROUP

COMPRISED OF ONE MEMBER EACH FROM:

- CSA (Canadian Space Agency)
- RASA (Russian Aviation and Space Agency)
- ISAS (Institute of Space and Astronautical Science, Japan)
- ESA (European Space Agency)
- NASA (National Aeronautics and Space Administration)

**STEERING COMMITTEE MEMBERS:**

- Dr. David Sibeck, Executive Secretary - National Aeronautics and Space Administration (NASA)
- Dr. Madhulika Guhathakurta - NASA
- Dr. Richard Marsden - European Space Agency (ESA)
- Dr. Lev Zelenyi - Russian Aviation and Space Agency (Rosavakosmos)
- Dr. Takeo Kosugi - Japan's Institute of Space and Aeronautical Science (ISAS)
- Dr. William Liu - Canadian Space Agency (CSA)



Next ILWS Steering Committee meeting in Banff, Canada planned for May 25-26, 2004.

ILWS Working Group meeting in Banff planned for May 25-26, 2004.

## SCIENCE

**ILWS: A SYSTEMS APPROACH**

1. Quantify physics, dynamics, and behavior of Sun-Earth connected system through the range of conditions occurring in the 11-year solar cycle
  - Obtain improved measurements
  - Better understand Sun-Earth disturbances
  - Understand the solar cycle
    - For long-range space weather forecasting & assessing solar role in climate change
  - Determine space environmental conditions vs. location, time in solar cycle
    - Needed for design of systems to minimize sensitivity to space weather
2. Develop predictive models for the system that:
  - Demonstrate understanding of physics
  - Have utility for prediction of space weather
3. Minimize impact of space weather on technology and astronauts
  - Develop improved space weather predictions and space environmental design specifications
  - Fly low-cost flight testbeds for validation of rad-hard, rad-tolerant systems

**THE RESULT: SCIENTIFIC UNDERSTANDING AND UTILITY**

